

Appl'n. No.: 09/505,556
Amendment
Response to Office Action of July 14, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of claims:

4. (Currently Amended) A method of storing audio data on a compact disk (CD)~~on a~~
CD, comprising:

storing ~~in the~~ in an audio portion of said CD a first two track audio signal, wherein
said first two track audio signal is reproducible by playing said CD on a
conventional audio CD player;

storing additional audio data on said CD outside of said audio portion according
to a distinct logical structure requiring a differing read process than the audio
portion of the CD; and

storing control information on said CD, wherein said first two track audio signal and
said additional audio data ~~can be~~ are adapted to be combined through use of
said control information to reproduce a unified audio signal.

5. (Original) The method of claim 4, wherein said unified audio signal comprises a
second two track audio signal of higher resolution than said first two track audio signal.

6. (Original) The method of claim 4, wherein said unified audio signal comprises
more than two channels.

7. (Currently Amended) A method for storing an audio signal of two or more channels,
comprising:

deriving data from the audio signal, said data comprising: ~~data, comprising:~~

a plurality of digital signals, wherein a first digital signal of said plurality of
digital signals is a first two track audio signal; and

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control information, ~~wherein a reproduction of~~ adapted for use in reproducing
said audio signal information can be produced from said plurality of
digital signals ~~by use of said control information;~~
storing said first digital signal on a first medium;
storing the remainder of said plurality of digital signals on one or more second media,
wherein said first and second media are distinct physical media; and
storing the control information.

8. (Original) The method of claim 7, wherein said first medium is a rewritable
memory.

9. (Original) The method of claim 8, further comprising:
compressing said first digital signal prior to storing on said first medium.

10. (Currently Amended) The method of claim 7, wherein said first medium ~~is the~~ is an
audio portion of a compact disk (CD), and wherein said first digital signal ~~can be reproduced~~
is adapted for reproduction on a conventional CD player.

11. (Currently Amended) The method of claim 115, wherein said one or more second
media ~~is the~~ is a CD-ROM portion ~~of said~~ of a CD.

12. (Original) The method of claim 11, wherein said control information is stored in the
CD-ROM portion of said CD.

13. (Currently Amended) The method of either of claims 7 or 107, wherein said audio
signal ~~and~~ comprises more than two channels.

14. (Original) The method of either of claims 7 or 107, wherein said reproduction of
said audio signal comprises a second two track audio signal of higher resolution than a
reproduction based on said first two track audio signal alone.

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(Claims 15-70 have been cancelled.)

71. (Currently Amended) A method for storing an N-channel audio signal, wherein N is an integer greater than two, comprising:

deriving from said N-channel audio signal a two channel representation;

recording said two channel representation on a first medium;

forming additional information, comprising:

a residual dependent ~~upon the~~ upon a difference between said N-channel audio signal and said two channel representation; and

control information, including data ~~that can be used to recombine~~ adapted for use in recombining said residual with said two channel representation to reconstruct an M-channel representation of said N-channel audio signal, wherein M is greater than two but not greater than N;

recording said residual on one or more second media, wherein said first and second media are distinct physical media; and

recording said control information.

72. (Currently Amended) The method of claim 71, wherein said first ~~media is the~~ medium is an audio portion of a compact disk (CD), and ~~-wherein said two channel representation can be reproduced~~ is adapted for reproduction on a conventional CD player.

73. (Currently Amended) The method of claim 119, wherein said recording of said control information is on said one or more second media, and wherein said one or more second media ~~is the~~ is a CD-ROM portion of said CD.

74. (Original) The method of either of claims 71 or 117, wherein M equals N.

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75. (Original) The method of claim 74, wherein said residual contains (N-2) independent channels.

76. (Original) The method of claim 74, wherein said residual contains less than (N-2) independent channels.

77. (Currently Amended) The method of either of claims 71 or 117, further comprising:
compressing said residual prior to its recording.

78. (Currently Amended) The method of claim 77, wherein said control information contains data on how said residual is compressed further includes data for determining a technique for compressing said residual.

79. (Original) The method of either of claims 71 or 117, wherein the deriving from said N-channel audio signal a two channel representation is based upon a linear combination of a finite set of spatial harmonics.

80. (Currently Amended) A method for storing an N-channel audio signal, wherein N is an integer greater than two, comprising:

deriving from said N-channel audio signal a two channel representation based upon a linear combination of a finite set of spatial harmonics;
recording said two channel representation on a first medium;
forming additional information, comprising:

a residual dependent ~~upon the~~ upon a difference between said N-channel audio signal and said two channel representation, wherein said residual comprises a combination of zero and first order spatial harmonics which is linearly independent of said two channel representation; and
control information, including data ~~that can be used to recombine~~ adapted for use in recombining said residual with said two channel representation to

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reconstruct an M-channel representation of said N-channel audio signal,
wherein M is greater than two but not greater than N;
recording said residual on one or more second media; and
recording said control information.

81. (Currently Amended) The method of claim 71, wherein ~~the recording of~~ said first medium is a rewritable memory.

82. (Original) The method of claim 81, further comprising:
compressing said two channel representation prior to its recording.

(Claims 83-88 have been cancelled.)

89. (Currently Amended) A method of storing N-channel audio data ~~on a CD~~ on a compact disk (CD), wherein N is an integer greater than two, comprising:
storing a two track reduction of said N-channel audio data, wherein said two track reduction is reproducible by playing said CD on a conventional audio CD player; and
storing control information on said CD; and
storing additional audio data on said CD outside ~~of said of an~~ audio portion of said CD according to a distinct logical structure requiring a differing read process than the audio portion of the CD, wherein said two track reduction and said additional audio ~~information can be~~ data are adapted to be combined through use of said control information to reproduce an M-channel representation of said N-channel audio data, wherein M is greater than two but not greater than N.

90. (Currently Amended) The method of claim 89, wherein said additional audio ~~information~~ data is compressed.

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91. (Currently Amended) The method of claim 90, wherein the control information contains further includes data on how for determining a technique for compressing said additional audio data information is compressed.

92. (Original) The method of claim 89, wherein M is equal to N.

93. (Currently Amended) The method of claim 92, wherein said additional audio ~~information~~ data contains (N-2) independent channels.

94. (Currently Amended) The method of claim 92, wherein said additional audio ~~information~~ data contains less than (N-2) independent channels.

(Claims 95-106 have been cancelled.)

107. (Currently Amended) A method for storing an audio signal of two or more channels, comprising:

deriving data from the audio signal, said data comprising: data, comprising:
a plurality of digital signals, wherein a first digital signal of said plurality of digital signals is a first two track audio signal; and
control information, ~~wherein a reproduction of~~ adapted for use in
reproducing said audio ~~information~~ signal can be produced from said plurality of digital signals ~~by use of said control information;~~
storing said first digital signal on a first medium;
storing the remainder of said plurality of digital signals on one or more second media, wherein the first and second media have distinct logical structures requiring differing read processes; and
storing the control information.

108. (Previously Presented) The method of either of claims 4 or 89, where said additional audio data is stored in a CD-ROM portion of said CD.

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109. (Previously Presented) The method of claim 108, where said additional audio data is stored in a file format.

110. (Previously Presented) The method of claim 109, where the file format employs the ISO9660 standard.

111. (Currently Amended) The method of claim 7, wherein said first digital signal is stored on the first medium in an MP3 format.

112. (Previously Presented) The method of any of claims 7, 8, 111, or 107, wherein said one or more second media include a compact disk.

113. (Previously Presented) The method of claim 10, wherein said one or more second media include a supplemental compact disk.

114. (Currently Amended) The method of any of claims 7, 8, 10, 111, or 107, wherein said one or more second media ~~include the~~ include a hard drive of a personal computer.

115. (Previously Presented) The method of claim 107, wherein said first medium is a rewritable memory.

116. (Currently Amended) The method of claim 107, wherein said first medium ~~is the~~ is an audio portion of a compact disk (CD), and wherein said first digital signal ~~can be reproduced~~ is adapted for reproduction on a conventional CD player.

117. (Currently Amended) A method for storing an N-channel audio signal, wherein N is an integer greater than two, comprising:
deriving from said N-channel audio signal a two channel representation;
recording said two channel representation on a first medium;

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forming additional information, comprising:

a residual dependent ~~upon the~~ upon a difference between said N-channel audio signal and said two channel representation; and
 control information, including data ~~that can be used to recombine~~ adapted for use in recombining said residual with said two channel representation to reconstruct an M-channel representation of said N-channel audio signal, wherein M is greater than two but not greater than N;

recording said residual on one or more second media, wherein the first and second media have distinct logical structures requiring differing read processes; and
 recording said control information.

118. (Previously Presented) The method of claim 117, wherein said first medium is a rewritable memory.

119. (Currently Amended) The method of claim 117, wherein said first medium ~~is the~~ is an audio portion of a compact disk (CD), and wherein said ~~first digital signal can be reproduced~~ two channel representation is adapted for reproduction on a conventional CD player.

120. (Currently Amended) The method of claim 71, wherein said ~~first digital signal~~ two channel representation on the first medium is in an MP3 format.

121. (Previously Presented) The method of any of claims 71, 81, 117, or 120, wherein said one or more second media include a compact disk.

122. (Previously Presented) The method of claim 72, wherein said one or more second media include a supplemental compact disk.

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123. (Currently Amended) The method of any of claims 71, 72, 81, 117, or 120, wherein said one or more second media ~~include the~~ include a hard drive of a personal computer.